IN THE CLAIMS

Please replace the claims with the following listing of replacement claims:

1. (currently amended) A method of providing a synchronization signal to a terminal which is adapted for use in a communications network, the method comprising:

transmitting to said terminal a communication signal comprising a plurality of frames, each of said frames comprising at least one time slot, and arranging respective groups of said frames into a respective superframe; and

including a respective portion of said synchronization signal in at least one said time slot of a plurality of said frames, said synchronization signal including data which is adapted for use by said terminal to control transmission timing of said terminal; and

for each said superframe, said including step includes a portion of said synchronization signal in each said frame, such that each said portion comprises a respective phase signal that is unique for each respective frame within a particular superframe.

2. (original) The method of claim 1 wherein said including step includes in each of said frames said respective portion of said synchronization signal in at least one time slot.

3. (original) The method of claim 1, wherein said including step includes said portion of said synchronization signal in each said frame, such that said synchronization signal comprises a unique word signal that is substantially the same in each frame.

4. (canceled).

5. (currently amended) The method of ~~claim 4~~ claim 1, wherein said transmitting step further includes transmitting the start of each of said superframe such that it substantially coincides with the start of one of said frames.

6. (currently amended) The method of claim 5 wherein said transmitting step further includes transmitting the start of each of said frames such that it substantially coincides with the start of one of said time slots.

7. (currently amended) The method of ~~claim 4~~ claim 1, wherein said including step includes said phase signals in said frames of said superframes in the same order for each said superframe.

8-15. (canceled).

16. (currently amended) A method of providing a synchronization signal to a terminal adapted for use in a satellite communication system, the method comprising:

generating said synchronization signal as a plurality of unique phase signals; and

transmitting a communication signal to said terminal, said communication signal comprising a plurality of frames, a portion of each frame comprising a respective one of said plurality of unique phase signals; and

wherein said communication signal comprises a plurality of superframes, each superframe comprising a plurality of said frames, such that the order of unique phase signals in each frame repeats in every superframe; and

~~The method of claim 15~~ wherein the number of frames per superframe is equal to the number of unique phase signals.

17. (currently amended) A method of providing a synchronization signal to a terminal adapted for use in a satellite communication system, the method comprising:

generating said synchronization signal as a plurality of unique phase signals; and

transmitting a communication signal to said terminal, said communication signal comprising a plurality of frames, a portion of each frame comprising a respective one of said plurality of unique phase signals; and

wherein said communication signal comprises a plurality of superframes, each superframe comprising a plurality of said frames, such that the order of unique phase signals in each frame repeats in every superframe; and

~~The method of claim 15,~~ wherein said transmitting step transmits said communication signal such that the beginning of each superframe substantially coincides with the beginning of one of said frames.

18-21. (canceled).

22. (currently amended) A method of acquiring a communication signal, the communication signal comprising a plurality of frames, each frame comprising a plurality of time slots, at least one time slot in each frame having synchronization data with a unique word signal contained therein, the method comprising:

(a) setting the gain of an automatic gain control circuit based on the maximum power measured in continuous time intervals being less than the duration of one time slot of each frame;

(b) correlating at least one frame with a locally generated unique word signal at at least one of a plurality of possible frequencies;

(c) storing a correlation value for each of said possible frequencies;

(d) setting a numerically controlled oscillator (NCO) frequency based on a desired correlation value of said possible frequencies;

(e) repeating steps (a)-(d) while the correlation value is below a frequency acquisition threshold, and when said correlation value is at least equal to said frequency acquisition threshold, performing the steps of:

(f) determining an arrival time of the unique word signal in a first frame;

(g) estimating an estimated arrival time of the unique word signal in a second frame based on the arrival time of the unique word signal in said first frame;

(h) determining the actual arrival time of the unique word signal in said second frame;

~~(e)~~ (i) calculating a difference between the estimated arrival time and the actual arrival time;

(j) adjusting a voltage controlled oscillator (VCO) frequency based on said difference;

(k) repeating steps (f)-(j) while said difference is not below a timing acquisition threshold to determine acquisition of said communication signal.

23. (original) The method of claim 22, wherein said step of setting the gain measures time intervals that are no more than half of the duration of one time slot.

24. (original) The method of claim 22 wherein said correlating step is performed at each of said plurality of possible frequencies.

25. (original) The method of claim 22 wherein said step of setting the NCO frequency sets the NCO frequency based on the maximum correlation value of said possible frequencies.

26-29. (canceled).

30. (currently amended) A system for providing a synchronization signal to a terminal which is adapted for use in a communications network, the system comprising:

a transmitter for transmitting to said terminal a signal including a plurality of frames, each of said frames including at least one time slot;

wherein said transmitter includes a respective portion of said synchronization signal in at least one said time slot of a plurality of said frames, said synchronization signal including data which is adapted for use by said terminal to control the transmission timing of said terminal; and

~~The system of claim 26,~~ wherein the signal includes a plurality of superframes, each of said superframes including a plurality of said frames, and wherein said portion

of said synchronization signal includes a phase signal that is unique for each frame within a particular superframe.

31. (original) The system of claim 30, wherein the start of each of said superframes substantially coincides with the start of one of said frames.

32. (original) The system of claim 31, wherein the start of each of said frames substantially coincides with the start of one of said time slots.

33. (original) The system of claim 30, wherein said transmitter includes said phase signals in said frames such that the order of the phase signals is the same in each respective superframe.

34-41. (canceled).

42. (currently amended) A system for providing a synchronization signal to a terminal adapted for use in a satellite communication system, the system comprising:

a transmitter adapted to generate said synchronization signal as a plurality of unique phase signals and to transmit said synchronization signal to said terminal, said synchronization signal comprising a plurality of frames, a portion of each frame comprising a unique one of said plurality of unique phase signals; and

wherein the synchronization signal comprises a plurality of superframes, each superframe comprising a plurality of said frames, such that the order of unique phase signals in each frame repeats in each superframe; and

~~The system of claim 41~~ wherein the number of frames per superframe is equal to the number of unique phase signals.

43. (currently amended) A system for providing a synchronization signal to a terminal adapted for use in a satellite communication system, the system comprising:

a transmitter adapted to generate said synchronization signal as a plurality of unique phase signals and to transmit said synchronization signal to said terminal, said synchronization signal comprising a plurality of frames, a portion of each frame comprising a unique one of said plurality of unique phase signals; and

wherein the synchronization signal comprises a plurality of superframes, each superframe comprising a plurality of said frames, such that the order of unique phase signals in each frame repeats in each superframe; and

~~The system of claim 41,~~ wherein the beginning of each superframe coincides with the beginning of one of the frames.

44-47. (canceled).

48. (original) A system for acquiring a communication signal, the communication signal comprising a plurality of frames, each frame comprising a plurality of time slots, at least one time slot in each frame having synchronization data with a unique word signal contained therein, the system comprising:

a correlator adapted to correlate at least one frame of said communication signal with a locally generated unique word signal at at least one of a plurality of possible frequencies, to store a correlation value for each of said possible frequencies, and to set a numerically controlled oscillator (NCO) frequency based on a desired correlation value of said possible frequencies;

a gain setting device adapted to set the gain of an automatic gain control circuit (AGC) based on the maximum power measured in each frame in predetermined time intervals each being less than the duration of one time slot, to apply said gain to said communication signal, and to continue setting the gain of the AGC until said correlator generates a correlation value above a frequency acquisition threshold;

a voltage controlled oscillator (VCO) frequency offset reducer adapted to:

determine an arrival time of the unique word signal in a first frame;

estimate an estimated arrival time of the unique word signal in a second frame based on the arrival time of the unique word signal in said first frame;

determine the actual arrival time of the unique word signal in said second frame;

calculate a difference between the estimated arrival time and the actual arrival time;

adjust a VCO frequency based on said difference, and

repeat functions (a)-(e) on subsequent frames if said difference is not below a timing acquisition threshold value; and

a mode selection circuit for causing the system to enter a tracking mode if said difference is below said timing acquisition threshold value.

49. (original) The system of claim 48, wherein said predetermined time interval is no more than half of the duration of one time slot.

50. (original) The system of claim 48, wherein said correlator correlates at least one frame with a locally generated unique word signal at each of said plurality of possible frequencies.

51. (original) The system of claim 48, wherein the correlator sets the NCO frequency based on the maximum correlation value of said possible frequencies.